

REMARKS

Claims 1-14 are now pending in the application. Claim 1 has been amended. Claim 14 has been added as new. Support for the foregoing amendments can be found throughout the specification, drawings, and claims as originally filed. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

SUBSTANCE OF THE INTERVIEW

Applicants wish to thank Examiner Peling Andy Shaw for the telephonic interview held December 4, 2008 with Applicants' Attorney of record, Joseph M. Lafata . Therein, application of prior art reference Chen (U.S. Pub. No. 2004/0165592) to claims 1-13 was discussed. The undersigned argued that Chen failed to teach or suggest the claims. No agreement was reached in the interview.

REJECTION UNDER 35 U.S.C. § 103

Claims 1-13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Chen et al. (U.S. Pub. No. 2004/0165592) in view of Silverman (U.S. Pat. No. 6,731,649). This rejection is respectfully traversed.

Claim 1, as amended, recites:

a. a service entity at network service control layer obtaining calling subscriber address and called subscriber address and QoS requirement for a service through analyzing a service request of the calling subscriber, then applying for resources to IP access networks corresponding to the calling subscriber and the called subscriber, respectively;

b. edge routers corresponding to the calling subscriber and the called subscriber judging whether enough resources can be provided for this

service according to current resource condition, if so, executing step c, otherwise rejecting the service request of the calling subscriber; and

c. if there is an upward traffic stream sent from one of the calling subscriber and the called subscriber to the corresponding IP access network for this service, the corresponding edge router informing the corresponding access network end device of the QoS requirement for the service, and the corresponding access network end device performing bandwidth limitation according to bandwidth parameters in the QoS requirement informed by the corresponding edge router for the upward traffic stream;

if there is a downward traffic stream to be sent to one of the calling subscriber and the called subscriber from the corresponding IP access network for this service, the corresponding edge router setting priority in the corresponding IP access network for this service and forwarding the downward traffic stream to the corresponding subscriber according to the priority set by the corresponding edge router.

1. In item b of the response to arguments in the outstanding Office action, the Examiner has asserted that the limitation “*if there is an upward traffic stream sent from one of the calling subscriber and the called subscriber to the corresponding IP access network for this service, the corresponding edge router informing the corresponding access network end device of the QoS requirement for the service*” has been disclosed by Chen.

Applicant respectfully traverses the Examiner’s rejection and submits that the Examiner has mischaracterized the Chen reference.

Chen at best appears to show upward traffic from the subscriber to the network. **However, the direction for transmitting the QoS requirement in claim 1 is different from that of Chen.** In other words, in claim 1, the QoS requirement is transmitted in a downward direction. In contrast, the QoS requirement is transmitted in an upward direction in Chen.

For instance, in claim 1, the edge router informs the access network end device of the QoS requirement, i.e. in the download direction. However, in Chen, the subscriber 10 sends the QoS connection request including the QoS requirement to the ATU-R 12 (which is allegedly analogous to claimed the access network end device) (see [0094]). Upon receipt of the connection setup request, the ATU-R 12 sends a standard SVC SETUP message to the ATM switch 15. The SVC SETUP message includes and the QoS requirement (see [0095]). Seen from paras. [0094] and [0095] of Chen. The QoS requirement is sent from the subscriber 10 to the ATM switch 15 through the ATU-R 12, i.e. in the upward direction. Furthermore, the QoS requirement is transmitted in an upward direction in Chen is to **initiate** a connection with the ATM network 16, rather than to enable the access network end device to perform bandwidth limitation according to the QoS requirement for the upward traffic stream as recited in claim 1. The QoS requirement in Chen is used for applying resources for the QoS connection. In contrast, the QoS requirement in claim 1, which has been determined for the service, is used for performing bandwidth limitation for the upward traffic stream.

In addition, in Chen, after establishing the SVC connection, the ATM switch 15 responds to the ATU-R 12 with a CALL-PROCEED message is to **indicate** initiation of the requested connection at the QoS requirement and inform the ATU-R 12 which VPI/VCI should be used for this connection, **rather than to** notify the ATU-R 12 of the QoS requirement and enabling the ATU-R 12 to perform bandwidth limitation (see paras. [0097] and [0098] of Chen). In contrast, in claim 1, the edge router informing the corresponding access network end device of the QoS requirement for the service is to

enable the access network end device to perform bandwidth limitation according to the QoS requirement for the upward traffic stream.

In addition, the limitation *“if there is an upward traffic stream sent from one of the calling subscriber and the called subscriber to the corresponding IP access network for this service, the corresponding edge router informing the corresponding access network end device of the QoS requirement for the service”* differs from the art cited by the Examiner also in that the purpose for transmitting the QoS requirement in claim 1 differs from that of Chen. In other words, the directions of connection request in Chen cannot be simply switched, because the QoS connection in Chen can not be set up in a downward direction, i.e. from the ATM network 16 to the source subscriber 10.

2. Claim 1 recites *“performing bandwidth limitation according to bandwidth parameters in the QoS requirement informed by the corresponding edge router for the upward traffic stream.”*

Chen fails to disclose the above features. Chen at best appears to show storing the routing table and transmitting traffic packets from the source subscriber 10 over either the new QoS connection or the default route to the ISP according to the routing table (see [0039]). Policy routing in Chen refers to filtering the video conference traffic and directing such traffic to a separate gateway different from that default gateway defined in the existing routing table (see paras. [0042] and [0106]). In other words, the “routing table” and “policy routing”, etc. referred in Chen are merely used for directing the traffic to the destination subscriber. Chen fails to disclose that the access network end device performs bandwidth limitation for the upward traffic stream.

3. Applicant further submits that Chen and Silver fail to teach and suggest the features of *“if there is a downward traffic stream to be sent to one of the calling subscriber and the called subscriber from the corresponding IP access network for this service, the corresponding edge router setting priority in the corresponding IP access network for this service and forwarding the downward traffic stream to the corresponding subscriber according to the priority set by the corresponding edge router.”*

Although Chen appears to show directing the traffic to the destination subscriber by using the routing table, the method for transmitting the traffic in Chen is merely a generic concept, in which the upward traffic stream and downward traffic stream are not distinguished from each other.

In addition, although Chen appears to show “traffic packet priority information carried in IP header” and “select[ing] a PVE with the lowest service category” (see para. [0005] and [0090] of Chen) and Silverman appears to show “tagging ToS with high priority when going through the IP network” (see column 10, line 65-column 11, line 4), both Chen and Silverman fail to disclose that setting priority in the corresponding IP access network for the service is implemented by **the corresponding edge router**.

4. The Examiner has also asserted that Chen has disclosed the limitation of “bandwidth management”.

Chen at best appears to show that the connection server 25 performs a call admission control (CAC) step to determine if sufficient available bandwidth exists in the ATU-Rs and DSLAMs to accommodate the connection request (see [0035]). **The “bandwidth management” performed by the connection server in Chen is different from**

that of the claim 1. A person skilled in the art would appreciate that the connection server can only perform the **bandwidth management of the signaling stream**, but can not perform the **bandwidth limitation of the traffic stream**. In fact, the bandwidth management performed by the connection server 25 is to **determine** if sufficient available bandwidth exists in the ATU-Rs and DSLAMs to accommodate the connection, i.e. to establish, to tear down, and to obtain the status of SVC connections (see [0035]), rather than to perform bandwidth limitation for the traffic stream. All of the bandwidth management performed in Chen is for the establishment of the QoS connection. Since the traffic stream can only be transmitted on the QoS connection and the QoS connection has **not** been established, the bandwidth management referred here is not the bandwidth limitation of the traffic stream, and can only be the bandwidth management of the signaling stream.

Further, with respect to paragraph [0097] of Chen, the connection CAC performed by the ATM switch 15 also refers to the bandwidth management of the **signaling stream**. The ATM switch 15 performs the connection CAC is to manage bandwidth for the establishment of the QoS connection, rather than to perform bandwidth limitation for the traffic stream transmitted on the QoS connection.

Therefore, Chen fails to disclose the claimed “bandwidth limitation.”

In view of the foregoing, Applicant submits that claim 1 and its dependent claims 2-13 define over the art cited by the Examiner.

NEW CLAIMS

Applicant has added new claim 14 to provide varied scope of protection. Applicant submits claim 14 defines over the art cited by the Examiner for one or more of the reasons set forth above regarding claim 1.

In addition, claim 14 recites “establishing a connection in accordance with the QoS requirement for transmitting the service call between the first and second edge routers via the internet backbone network.” In contrast, Chen at best appears to show establishing an ATM switched virtual connection 50 between two ATM edge switches respectively residing in two different ATM domains that are connected via a common network to network interface (NNI) meeting point (see FIGURE 3 and para. [0045]). Chen, however, does not disclose establishing a connection via a internet backbone network.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner

believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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